971-203

JOURNAL OF

Ultrastructure Research

Editor FRITIOF S. SJÖSTRAND

Editorial Board

U. AEBI•B. AFZELIUS•J. ANDRÉ•B. BACCETTI•G. F. BAHR•A. BAIRATI•R. F. BAKER
T. S. BAKER•L. BARAJAS

R. J. BARRNETT • P. BAUDHUIN • S. R. BAWA • S. BULLIVANT • P. CASSIER
A. CLAUDE • A. I. COHEN • V. E. COSSLETT • W. TH. DAEMS • A. J. DALTON • M. DVOŘÁK
R. M. EAKIN • F. A. EISERLING

R. EKHOLM • K. ESAU • A. FREY-WYSSLING • L. L. HOEFERT • R. W. HORNE
S. INOUÉ • E. KELLENBERGER • A. L. LEHNINGER • J. H. LUFT • A. G. MATOLTSY
A. MAUNSBACH • R. K. MISHRA • L. PACKER • E. PAGE • S. L. PALAY • D. C. PEASE
J. B. LE POOLE • E. PUVION • J. T. RANDALL • J. F. REGER • E. J. REITH • J. P. REVEL
A. G. RHODIN • H. RIS • D. C. ROGERS • G. E. ROGERS • E. RUSKA • J. SCHRÉVEL • A. P. SOMLYO
W. STELL • E. VIVIER • E. R. WEIBEL • R. S. WEINSTEIN • R. W. G. WYCKOFF

Volume 84 1983



ACADEMIC PRESS

A Subsidiary of Harcourt Brace Jovanovich, Publishers

New York London

Paris San Diego San Francisco São Paulo Sydney Tokyo Toronto

Copyright © 1983 by Academic Press, Inc.

All rights reserved

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, any information storage and retrieval system, without permission in writing from the copyright owner.

The appearance of the code at the bottom of the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc. (21 Congress Street, Salem, Massachusetts 01970), for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. Copy fees for pre-1983 articles are as shown on the article title pages; if no fee code appears on the title page, the copy fee is the same as for current articles.

022-5320/83 \$3.00

MADE IN THE UNITED STATES OF AMERICA

Contents of Volume 84

NUMBER 1, JULY 1983

O. G. A. Nelson, J. D. McLean, and J. V. Sanders. A High-Resolution Electron Microscope Study of Synthetic and Biological Carbonated Apatites	1
Na-Sheng Lin and W. G. Langenberg. Immunohistochemical Localization of Barley Stripe Mosaic Virions in Infected Wheat Cells Giorgio Gabella. Asymmetric Distribution of Dense Bands in Muscle Cells of	16
Mammalian Arterioles Angela Dulhunty and Angelo Valois. Indentations in the Terminal Cisternae	24
of Amphibian and Mammalian Skeletal Muscle Fibers Angela Dulhunty, Peter Gage, and Angelo Valois. Indentations in the Terminal Cisternae of Slow- and Fast-Twitch Muscle Fibers from Normal and Par-	34
aplegic Rats	50
of the Slime Mold <i>Dictyostelium discoideum</i> Martine Verger-Bocquet. Etude infrastructurale des organes photorécepteurs chez	60
les larves de deux Syllidiens (Annélides, Polychètes) S. A. Nierzwicki-Bauer, D. L. Balkwill, and S. E. Stevens, Jr. Use of a Computer-Aided Reconstruction System to Examine the Three-Dimensional Architec-	67
ture of Cyanobacteria FAKAHIRO GOTOW AND PAULO H. HASHIMOTO. Filipin Resistance in Intermediate Junction Membranes of Guinea Pig Ependyma: Possible Relationship to Fila-	73
mentous Underlying LUCIEN REY ET ANNE MOREAU. Sur les inclusions paracristallines des cellules nour-	83
ricières de la galle provoquée par Diplolepis rosae L. sur Rosa canina L	94
NUMBER 2, AUGUST 1983	
N. Thürauf, R. Dermietzel, and P. Kalweit. Surface Charges Associated with Fenestrated Brain Capillaries. I. <i>In Vitro</i> Labeling of Anionic Sites	103
Fenestrated Brain Capillaries. II. In Vivo Studies on the Role of Molecular Charge in Endothelial Permeability	111
AMES J. LIPKA, JAMES F. HAINFELD, AND JOSEPH S. WALL. Undecagold Labeling of a Glycoprotein: STEM Visualization of an Undecagoldphosphine Cluster Labeling the Carbohydrate Sites of Human Haptoglobin–Hemoglobin Complex	120
TUDY M. STRUM, PATRICIA C. PHELPS, AND MARIETTA M. McAtee. Resting Human Female Breast Tissue Produces Iodinated Proteins	130
YASUHIRO HOSAKA AND JUN HOSOI. Study of Negatively Stained Images of Sendai	140
OSEPH B. DELCARPIO, ROY J. BAERWALD, AND LISA J. MAGNUSON. Multiple SR-T	
Massimo Derenzini, Daniele Hernandez-Verdun, Annalisa Pession, and	151
FRANCESCO NOVELLO. Structural Organization of Chromatin in Nucleolar Organizer Regions of Nucleoli with a Nucleolonema-like and Compact Ribonucleo-	
ganizer Regions of Nucleoli with a Nucleolonema-like and Compact Ribonucleo-	161

A. F. Hayward and A. P. Kent. Gap Junctions in the Epidermis of Fetal Rats Studied by Transmission Electron Microscopy E. Porchet-Hennere and G. Nicolas. Are Rhoptries of Coccidia Really Extrusomes?	182 194
NUMBER 3, SEPTEMBER 1983	
NORMAN J. WILSMAN AND CORNELIA E. FARNUM. Arrangement of C-Tubule Protofilaments in Mammalian Basal Bodies	205
JEAN-LOU JUSTINE AND XAVIER MATTEI. Comparative Ultrastructural Study of Spermiogenesis in Monogeneans (Flatworms). 2. <i>Heterocotyle</i> (Monopisthocotylea, Monocotylidae)	213
JEAN-LOU JUSTINE AND XAVIER MATTEI. Comparative Ultrastructural Study of Spermiogenesis in Monogeneans (Flatworms). 3. Two Species of Amphibdelloides (Monopisthocotylea, Amphibdellatidae)	224
B. G. M. Jamieson. The Ultrastructure of the Spermatozoon of the Oligochaetoid Polychaete <i>Questa</i> sp. (Questidae, Annelida) and Its Phylogenetic Significance	238
NIGEL G. F. COOPER AND BARBARA J. McLaughlin. Tracer Uptake by Photoreceptor Synaptic Terminals. I. Dark-Mediated Effects	252
in the Plasma Membrane of Zebrafish Spermatozoa Daniel C. Pease. Supramolecular Aggregation and Organization in Peripheral Nerve	268
Myelin Seizo Fujikawa. Tannic Acid Improves the Visualization of the Human Eryth-	275
rocyte Membrane Skeleton by Freeze-Etching Ryo Soda and Mehdi Tavassoli. With statistical analysis by Thomas Y. Barnes. Mapping of the Bone Marrow Sinus Endothelium with Lectins and Glycosylated Ferritins: Identification of Differentiated Microdomains and Their Functional	289
Significance YOSABURO SHIBATA, HIROSHI IIDA, AND TORAO YAMAMOTO. Occurrence of Membrane Particle Aggregates on the Luminal Surface of Goldfish Intestine Revealed	299
by Quick-Freezing A. F. Payer and T. A. Parkening. Membrane-Bound Intranuclear Inclusions in	311
the Leydig Cell of the Chinese Hamster (<i>Cricetulus griseus</i>) Author Index for Volume 84	317 326

The Subject Index for Volume 84 will appear in the December 1983 issue as part of a cumulative index for the year 1983.

INFORMATION FOR AUTHORS

ournal of Ultrastructure Research publishes papers dealing with the ultrastructural organization of biologic erial as analyzed by means of electron microscopy, X ray diffraction techniques, X ray microscopy, and arization optical analysis. Papers dealing with techniques and instruments that are of importance for the elopment of this field will also be accepted. The field covered by the journal extends from the structure of ecules that are of biologic interest to the level of cell and tissue organization at the limit of the range of light roscopy, with emphasis on high resolution papers dealing with electron microscopy. Preference will be given experimental work, particularly those papers dealing with correlation of biochemical and structural properties. ely descriptive contributions should deal with the discovery of new structural components.

ubmission of manuscripts. Manuscripts may be submitted to Journal of Ultrastructure Research, Editorial ce, Seventh Floor, 1250 Sixth Avenue, San Diego, California 92101.

Original papers only will be considered. Manuscripts are accepted for review with the understanding that the nework has not been and will not be published nor is presently submitted elsewhere, and that all persons ed as authors have given their approval for the submission of the paper; further, that any persons cited as a tree of personal communications has approved such citation. Written authorization may be required at the tor's discretion. Articles and any other material published in the *Journal of Ultrastructure Research* represent opinions of the author(s) and should not be construed to reflect the opinions of the Editor(s) and the Publisher.

authors submitting a manuscript do so on the understanding that if it is accepted for publication, copyright the article, including the right to reproduce the article in all forms and media, shall be assigned exclusively he Publisher. The Publisher will not refuse any reasonable request by the author for permission to reproduce of his or her contributions to the journal.

Form of manuscript. Two copies of the manuscript should be submitted. Manuscripts in English, French, and rman are accepted. They should be typed double-spaced on one side only of $8\frac{1}{2} \times 11$ in. white bond paper h 1 in. margins on all sides. Page 1 should contain the article title, author(s) name(s) and affiliation(s), a art running head (abbreviated form of title) not exceeding 40 characters including letters and spaces, and the ne and complete mailing address of the person to whom correspondence should be sent. Page 2 should itain a brief abstract (not exceeding 150 words).

Manuscripts should be submitted in complete and final form for publication. The policy of the Editor will be prompt a publication as is possible; that is, from three to six months after the final date of receipt of the nuscript by the Editor.

Figures. Two sets of figures mounted on white illustration board, in camera-ready form must be submitted. ch figure must be labeled with press-on lettering either 4.7 or 3 mm in height and no larger than 7.8 mm in ith. Do not label the figures with figure number. Indicate the number of the picture on the back of the istration board or on the board adjacent to the picture. Applying the lettering to an overlay is not acceptable, an alternative, each figure can be lettered directly with India ink outlined in white. It is important to remember it all figures will be printed as received.

The dimensions of the printed page, $5\frac{1}{2} \times 8$ in., or 140×203 mm, should be kept in mind when preparing figures for publication. The width of the pictures on the mounted plates should either be 142 mm or 157 n. In the case that the width is 142 mm, the height can be varied up to a maximum of 205 mm. Pictures at are 157 mm wide must be full page pictures, with a maximum height of 212 mm and a minimum height 192 mm.

All figures, whether photographs or drawings, should be numbered consecutively, as Fig. 1, Fig. 2, etc. Each lividual figure must be numbered separately; do not use Fig. 1a, Fig. 1b, etc. Other illustrations, such as agrams, should be referred to as Chart 1, Chart 2, etc. Figure legends should be typed in sequence on a separate eet.

Stereoscopic pairs should be submitted properly mounted with a stereobase of 65 mm, i.e., each half picture ust be 65 mm wide and properly cropped for optimum stereo-viewing. The stereo-pairs should be mounted thout space between them. They will be printed at the same magnification.

Graphs and diagrams should be carefully drawn in black India ink on white or blue-line coordinate paper. ttering should be uniform and large enough to be legible after a reduction of 50–60%. Originals of drawings, aphs, and diagrams should be submitted.

A maximum of five pages of half-tone illustrations will be allowed per article; authors will be charged for cess half-tone illustrations. No color illustrations will be accepted unless the author is prepared to cover the st of reproduction.

Tables. Tables should be typed double-spaced on a separate sheet and numbered with Roman numerals. Each ble must have a short descriptive heading typed double-spaced over the table. Footnotes to tables should be entified by superscript lower case letters (a, b, c) and typed below the table. Tables should be planned to fit e proportions of the printed page.

Footnotes should be avoided, but if they must be used they should be numbered consecutively and placed ouble-spaced) on a separate page at the end of the manuscript.

References should be arranged in alphabetical order according to the first author's surname and typed double spaced on a separate page at the end of the manuscript. They should be referred to in text by the author surnames and the date of publication, e.g., Doe and Jones (1976), Jones et al. (1976), or (Doe, 1975; Jones 1976). Abbreviations of journal titles should follow Chemical Abstracts Service Source Index, 1980. No carefully the following styles for references.

WILLISON, J. H. M., AND DAVEY, M. R. (1976) J. Ultrastruct. Res. 55, 303-312.

ROGER, G. E. (1964) in Montagna, W., and Lobitz, W. C., Jr. (Eds.), The Epidermis, pp. 178–180, Academ Press, New York.

SJÖSTRAND, F. S. (1967) Electron Microscopy of Cells and Tissues, Academic Press, New York.

Proofs. Galley proofs will be sent to the author, with a reprint order form. Authors will be charged for alteration in excess of 10% of the cost of composition.

Reprints. Authors will be furnished, free of charge, with 50 reprints without covers and may order addition quantities. Order forms are submitted with galley proofs. The order forms should be completed, indicating shipping and billing instructions, and returned with the proofs.